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Long-period SUUMa dwarf nova V1006 Cygni: Outburst activity and variability at different brightness states in 2015 - 2017

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Abstract

© 2018, Astronomical Institute, Slovak Academy of Sciences. CCD photometric observations of the dwarf nova V1006 Cyg were carried out in 2015 { 2017 with 11 telescopes located at 7 observatories. They covered the 2015 superoutburst with rebrightening, five normal outbursts of ~ 4-day duration and one wide outburst that lasted at least seven days. The interval between normal outbursts was 16 and 22 days, and between superout- bursts is expected to be longer than 124 days. The positive superhumps with the mean period of 0d:10544(10) and 0d:10406(17) were detected during the 2015 superoutburst and during the short-term quiescence between rebrighten- ing and the start of the first normal outburst, respectively. During a wide 2017 outburst the orbital period 0d:09832(15) was found. The amplitude of this sig- nal was ~ 2:5 times larger at the outburst decline than at its end. During the quiescence stage between the first and the second normal outbursts in 2015 we possibly detected the negative superhumps with the period of 0d:09714(7). In all other cases of quiescence we found only the quasi-periodic brightness variations on a time scale of 20{30 minutes with a different degree of coherence and a variable amplitude reaching 0.5 mag in extremal cases.

Keywords

Dwarf novae, Photometry, Rapid variability, Superhumps

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